NATIONAL PARK SERVICE
ENVIROFACTS
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National Park Service
Hazardous Waste Management &
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WASTE BATTERY MANAGEMENT

DEFINITIONS

Battery: A device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electrical energy. Batteries in which the electrolyte has been removed are also included in the definition. Battery types include leaqd acid (auto/truck/equipment), small sealed lead acid (SSLA), nickel-cadmium (Ni-Cad), mercury, lithium, and alkaline.

Waste Battery: A battery becomes a waste when it meets the definition of a waste under 40 CFR Part 261 or when the generator decides to discard it.

APPLICABLE STANDARDS

Federal: Handlers of lead-acid batteries that are not offered for reclamation must manage their lead acid batteries under the Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) hazardous waste regulations (40CFR Parts 260-272). If offered for reclamation, lead acid batteries are exempt from hazardous waste program regulations (40CFR part 266(g)). Nickel-cadmium (Ni-Cad), mercury-containing, small sealed acid (SSLA) batteries are regulated under Mercury-Containing and Rechargable Battery Recycling Act (Battery Act) and **Standard for Universal Waste Management (40CFR Part 273).** Parks are encouraged to manage their batteries under the **Standard for Universal Waste Management** because it minimizes RCRA liability. Therefore, this Evirofacts sheet only addresses the requirement of 40 CFR 273.

State: State regulations may be more stringent than the federal standard. The requirements for your state must be reviewed to thoroughly assess compliance status.

Other: Additional federal and state standards may apply to the storage and transport of waste batteries.

HANDLING & STORAGE

Facilities that accumulate greater than 5,000 kg (11,025 lbs.) of Universal Waste at any one time are considered Large Quantity Handlers (LQH). Small Quantity Handlers (SQH) never accumulate greater than 5,000 kg. All parks should preserve their SQH status by never accumulating greater than a 5,000 kg aggregate of the following three universal wastes:

- Waste Batteries
- Waste Pesticides
- Waste Mercury Thermostats

An SQH must manage waste batteries in a way that prevents releases to the environment. The park may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (40 CFR 273.13):

- Sorting batteries,
- Mixing battery types in one container,
- Discharging batteries so as to remove electric charge,
- Regenerating batteries,
- Disassembling batteries or battery into individual batteries or cells
- Removing batteries from consumer products, and
- Removing electrolyte from batteries (if the electrolyte is a hazardous waste it must be managed under RCRA).

Labeling: Waste batteries or containers holding batteries must be labeled or marked clearly with any one of the following phrases: "Universal Waste-Battery(ies)," "Waste Battery(ies)," or "Used Battery(ies)." (40 CFR 273.14)

Accumulation Time: Parks are not permitted to store waste batteries longer than one year. Parks must be able to demonstrate the duration that waste batteries have been accumulated on-site. A good method includes storing all waste batteries in a central location and posting the date of the oldest battery on a log. Alternate tracking options are provided in 40 CFR 273.15.

RECYCLING

Parks are not permitted to dispose of their waste batteries. Batteries should be returned to retailers, wholesalers, or recycling centers. Whichever service is chosen, it is important to verify that the recycling facility is properly permitted and operating in accordance with all federal, state, and local requirements.

If parks choose to transport waste batteries, it must be done in accordance with the general requirements of 40 CFR 273 subpart D and 49 CFR 171-180. Parks should use authorized universal waste transporters when possible.

SPECIAL TOPICS

Notifications

A SQH of waste batteries is not required to notify the EPA of universal waste handling activities (40 CFR 273.12). You must, however, review your state's requirements to determine if reporting is required for your specific park.

Training

Employee training under 40 CFR 273.16 requires that an SQH inform all employees who handle or have responsibility for managing universal waste. The information must describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the park.

Spill Response

All batteries that show evidence of leakage, spillage, or damage that could cause leakage, must be placed in a compatible container that will contain potential releases (40 CFR 273.13).

If a release does occur, the park must immediately contain all waste and residue from the battery. The park must determine if the released material is a hazardous waste and manage it in accordance with 40 CFR 260-272.

POLLUTION PREVENTION

- Investigate the use of nickel-metal hydride (Ni-MH) batteries as environmentally preferable alternatives to SSLA, Ni-Cad, mercury, lithium, and alkaline batteries
- Purchase batteries from companies which will pick up used batteries and transport them to a recycling facility.
- Purchase rechargeable batteries when feasible.
- Store waste batteries in designated areas that have secondary containment. (Indoors or in covered areas is ideal)
- Place batteries on wooden pallets.
- Provide appropriate spill response equipment and personal protective equipment.

ENVIROFACTS X-REFERENCES

- Environmental Training
- Hazard Communication
- Hazardous Waste Characterization

WASTE BATTERY MANAGEMENT CHECKLIST

Checklist Item	Notes
1. Determine whether your state has adopted more stringent standards for facilities that generate, collect, transport, or manage waste batteries.	
2. Confirm that your park does not generate greater than 5,000 kg of waste batteries at any one time.	
3. Ensure that employees are trained regarding proper handling and emergency procedures appropriate to the waste batteries managed including use of necessary personal protective equipment.	
4. Ensure that waste batteries are in good condition and free of leaks or breaches. All leaking batteries should be placed in compatible containers.	
5. Confirm that all waste batteries or containers are labeled in accordance with the labeling requirements summarized on the front of this sheet.	
6. Ensure that waste batteries are not stored greater than one year and documentation is maintained to demonstrate compliance.	
7. Ensure that all waste batteries are managed as a universal waste and sent to one of the following recycling sources: • retailers, • wholesalers, or • recycling centers.	